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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Thomas Sebastian

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EXAMINER

REIS, RYAN ALEXANDER

ART UNIT

PAPER NUMBER

3752

MAIL DATE

DELIVERY MODE

10/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/564,212	Applicant(s) SEBASTIAN, THOMAS	
	Examiner RYAN REIS	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9, 11 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9, 11 and 13-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on 06/29/2009, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,446,885 to Sims et al. (Sims et al.).

As to claim 9, Sims et al. discloses a fuel injector comprising: a solenoid coil (110); a tubular support (34) acting as an inner pole of the solenoid coil (see Figure 1); and a filter element (134) affixed on an outer contour of the tubular support (see Figure 2); wherein the outer contour of the tubular support includes grooves (58); wherein the tubular support includes a shoulder (166) on a discharge side of the grooves; and wherein the shoulder extends radially outward beyond outer edges of the grooves (see Figure 2).

As to claim 13, Sims et al. discloses the filter element rests against the shoulder (see Figure 2; see also column 6, lines 4-9).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 9, 11 and 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,335,863 to DeGrace (DeGrace) in view of US Patent 3,779,268 to Conkling (Conkling).

As to claim 9, DeGrace discloses a fuel injector comprising: a solenoid coil (20); a tubular support (30) acting as an inner pole of the solenoid coil; and a filter element (38) affixed on an outer contour (top portion of 30) of the tubular support (see Figure 2); wherein the tubular support includes a shoulder (at 48; see Figure 2); and wherein the shoulder extends radially outward (shoulder extends radially outward beyond the outer edge of the top of 30). DeGrace does not expressly disclose the outer contour of the tubular support includes grooves.

However, Conkling discloses a tubular support (50) and a filter element (42, 46 and 56) affixed on an outer counter of the tubular support (see Figure 2), wherein the tubular support includes grooves (at 58) for the purpose of providing a secure fitting for the filter element.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to have added grooves to the top of the tubular support of DeGrace as taught by Conkling in order to provide a more secure fitting for the filter element.

As to claim 11, DeGrace as modified by Conkling above does not expressly disclose machine cutting the grooves with the aid of a form steel.

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However, machine cutting with steel is well known in the art for making grooves as desired.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to have made the grooves in the tubular support by machine cutting with the aid of a form steel since the method of machine cutting is well known in the art and does not create a structural difference from the cited prior art.

As to claim 13, DeGrace discloses the filter element rests against the shoulder (see Figure 2).

As to claims 14-16, DeGrace discloses an extension sleeve (34; see Figure 2) surrounding the exterior of the filter element, wherein the extension sleeve has an inner diameter that is slightly smaller than an outer diameter of the filter element, whereby a press-fit between the filter element and the tubular support is achieved by the extension sleeve (see column 3, lines 52-68; see also claim 3).

As to claims 17-21, DeGrace discloses the filter element includes a cup-shaped filter (see Figure 2). DeGrace does not expressly disclose the filter being made of a cloth material and a glass fiber plastic extrusion coat.

However, applicant admits in the specification (page 2, lines 23-26), "The filter element is able to be manufactured **like conventional filter elements**, in the shape of

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a cup and made from cloth material and a fiber glass plastic extrusion coat.” (*emphasis added*)

Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to have made the filter of a cloth material and a glass fiber plastic extrusion coat according to the conventional means.

As to claim 22, DeGrace as modified in the rejections above discloses a method for installing a fuel injector, the fuel injector having a solenoid coil, a tubular support acting as an inner pole of the solenoid coil, and a filter element affixed on an outer contour of the tubular support, the method comprising the steps of: producing the filter element, the filter element including a cup-shaped filter having a cloth material; extrusion-coating the filter element with a glass fiber plastic extrusion coat; providing grooves in the outer contour of the tubular support, the tubular support including a shoulder on a discharge side of the grooves, and the shoulder extending radially outward beyond outer edges of the grooves; mounting the filter element onto the outer contour of the tubular support; mounting an extension sleeve on an outer contour of the filter element, an inner diameter of the extension sleeve being slightly smaller than an outer diameter of the filter element; and compressing the glass fiber plastic extrusion coat of the filter element into the grooves in the outer contour of the tubular support, using mounting pressure applied by the extension sleeve.

Response to Arguments

6. Applicant's arguments, see Appeal Brief, filed 06/29/2009, with respect to the rejection(s) of claim(s) 9 under 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of US Patent 3,779,268 to Conkling and US Patent 6,446,885 to Sims et al.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RYAN REIS whose telephone number is (571)270-5060. The examiner can normally be reached on Monday through Friday 8:00am to 6:00pm EST.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RR/

Examiner, Art Unit 3752

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752